

THE DETERMINANTS OF TAX REVENUE IN KENYA

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DECLARATION

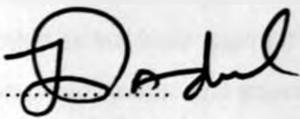
This research project is my original work and has not been submitted to any other University for academic award.

Sign.....

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This research project has been submitted for examination with my approval as the University supervisor.

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ABSTRACT

Kenya has been undertaking tax reform to improve on tax revenue collected. Even though reforms are done in Kenya fiscal structures reveals that government expenditure and revenue remained consistent with always expenditure exceeding revenue. The imbalance between revenue and expenditure results in large fiscal deficits that have made Kenya to continuously have external borrowing. A poor tax performance, in terms of raising revenue can either mean deficiencies in tax structure or an inadequate effort on the part of the government, both of which are influenced by various factors. The main objective of this study was to establish the determinants of tax revenue in Kenya for the period 2007-2011 thus five years because it is government development period required. The study is important because change in determinants of tax revenue has a great impact on tax revenue collected as a result of financial sustainability for a nation.

The researcher has adopted model used by Wawire who studied on determinant of VAT in Kenya who had borrowed a model from Paul Samuelsons who came up with fundamental general equilibrium analysis of the public sector. Through regression analysis showed negative and positive relationship for tax determinants. Change in oil prices and exchange rates variables reflects positive effects and GDP and change in tax rates reflected negative effects on tax revenue. The study concludes that Kenya's tax revenue is very responsive to changes in their determinants especially exchange rates and change in oil prices. There is therefore the challenge of creating a stable tax determinant system so that tax revenues can increase rapidly as the economy grows. Further exchange rate and changes in oil prices should be monitored with strictness because they main key determinants to the growth of the economy.

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ABBREVIATIONS

ABBREVIATIONS

KRA	Kenya Revenue Authority
VAT	Value Added Tax
OPEC	Organisation for Petroleum Exporting Countries
GDP	Gross Domestic Product.
PAYE	Pay As You Earn
CIF	Custom Insurance Freight

DEFINITIONS OF TERMS

- Determinants** They are the main issues that lead to quantity of tax collection or effects that contributes to increase tax collection.
- Tax Revenue** These are receipts, fines penalties among others that are voluntarily and compulsory deducted from the services rendered to various corporate bodies and public by government and are collected by an agent body on behalf of the government known as KRA.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

In Kenya government expenditures are funded using revenue. Revenue is the receipts collected from taxes, appropriation of aid, borrowings, grants and revenue from public investments. Tax Revenue is a percentage of total government collected to finance the government total expenditure; Musgrave and Musgrave (2004). Tax revenue is generated from indirect and direct taxes. Direct taxes are paid and accounted for by individuals and corporation such as Pay As You Earn (PAYE). Indirect taxes are levied upon production and consumption such as Value Added tax (Vat). Appropriation in Aid is an income from services rendered by ministries which are surrendered to Exchequer every financial year. Appropriation in Aid contributes towards government receipts. Borrowing is another area where of government generates revenue. When the government expenditure exceeds revenue collected then government borrows to cover the shortfall. Borrowing may be internal or external borrowing .Grants are foreign aid which are non refundable from one country to another. Revenue collected from public investments is generated from the sale of government assets and dividend earned various government investments.

Treasury is a department which is under ministry of Finance that is responsible with assessing and accounting of revenue collected. Treasury have several departments that are used to collect revenue including income tax, Custom and Exercise and Sales departments. Part of revenue is collected at the source and accounted for to the right departments. Total revenue collected is accounted for and any differences between the actual and approved estimates must be explained. The total collected revenue is allocated to various government expenditures through the sub budgets submitted from various ministries to come up with the main government budget which comprises of all the national income and expenditure.

In Kenya revenue collected from taxation remains the single largest source of government budgetary resources. For the last one decade tax revenue is made up 80 % of total government revenue (including grants). In the last five years, the contribution of tax to total government recurrent revenue (excluding grants) has averaged 93 %.Comparison of various

taxes shows that direct taxes compared to indirect taxes contribute a greater share of overall tax revenues. In the year 2011/2012, the highest tax contribution came from VAT followed by Personal Income Tax and then Corporate Income Tax. The ratio of tax revenue to GDP has gradually increased from 14 % in last one decade to 22 % in 2011. The current ratio of 22 % is relatively high compared to most of the other countries in the region; like Uganda reported an average tax to GDP ratio of 11.1 % and in Rwanda it was 9.2 % Deloitte Kenya (2012) budget analysis.

Since independent Kenya have been faced with budget deficit because revenue collected has a shortfall which increases year after year. In the 2012/2013 budget speech read by Minister of Finance on Thursday 14th June 2012 at 1.28 pm stated that total expenditure will be 1.45 trillion where expected revenue will be 1.1808 trillion a deficit of 279 billion financed through domestic and external borrowing. When we compare 2012/2013 and 2011/2012 deficit increased from 184.3 billion to 279 billion even though budget depicted growth in GDP of 5.2% in 2012 with a world economy projected to grow by 3.5%. In the same budget speech of 2012/2013 Minister of Finance gave mandate KRA to improve revenue collection by implementing comprehensive strategy to hold landlord and tenants accountable in tax collection. He quoted “ to safeguard the revenue base and equity increase, Kenya Revenue Authority (KRA) will institute an effective exercise; Kenyan budget statement (2012/13)

1.1.1 Taxes in Kenya

Tax can be defined as the charge levied by the government of a given country upon its habitants for its support or for the purpose of facilitating the public of that country. Tax is an enforced payment to the government of which non-payment of it, the tax payer will be punishable by law Musgrave and Musgrave (2004). The purpose of taxes is to create welfare for the society by providing public services, protection to properties, defence expenses, and economic infrastructure. Kenya since independence had income tax, corporation tax, trade taxes and excise taxes while Value-added taxes were introduced later. Personal and corporate income tax is levied on individuals, corporations and certain specified earnings. It takes the form of tax on actual earned income in the case of individuals and on company profits. A withholding tax is charged on other sources of income including royalties, dividends and rental income among others. These taxes generally capture formal sector business profits and employment income only.

Income tax is divided into four separate categories; Personal Income Tax (PIT), Pay as You Earn (PAYE), Corporate Income Tax (CIT) and Withholding Tax (WHT). Personal Income Tax (PIT) is a tax on income from individual businesses paid largely by self-employed self-assessment income tax returns for their businesses to show income and deductible business expenses. Income from employment is also taxable and is subject to Pay as You Earn (PAYE). Under the PAYE system the employer, act as an agent of the tax authority, is required to recover tax on employment income including the value of all benefits except medical ones. That income is taxed in full, as expenses are not deductible in the case of employment income. In the cases of both PIT and PAYE, tax is charged at the same graduated scale tax rate but on different tax bases Simiyu (2003)

Value Added Tax is a multistage consumption tax applied to the sale of goods and services at all stages of the production and distribution chain. Only registered traders are required to charge VAT, and for a trader to qualify for registration under VAT, he or she must have an annual sales turnover of Kshs 3 million. Trade taxes are taxes on exports and imports. Customs or import duty is the most dominant of the trade taxes and is charged on the Custom Insurance Freight (CIF) value (cost value including insurance and freight) of imported goods based on tariff bands ranging from 0 to 100 per cent. Excise tax is also a trade tax applied to either production or sale, to domestic output or imported, with either ad valorem or specific rates. Kenya's excisable commodities at the moment are alcoholic beverages, soft drinks, mobile air time, bottled water, tobacco, fuel, cosmetics, jewellery and motor vehicles. Excise tax rates are particularly high in cases where a negative impact results from consuming harmful goods or services, or in cases of luxury goods that have a lesser substitution effect even with higher tax rates Simiyu (2003).

1.1.2 Taxation and Economic Development

In developing countries the main aim is to stimulate economic and social development. Recently developing countries have introduced the millennium development goals where each country is working to achieve them. Kenya is working to achieve these goals by Vision 2030 to ensure that poverty is eradicated, have universal education, create gender equality, and improve maternal health, control HIV Aids, environmental sustainability and cerate global partnership. These goals are reached by government through sponsors from various developed countries and use of the tax revenue to achieve them. Kaldor (1964) pointed out the importance of government revenue in accelerating economic development. Whatever the

prevailing ideology or political situation of a particular country, it must steadily expand a host of non-revenue yielding services such as education, health, infrastructure, and social security. Toyé (1978) asserted that the link between taxation and economic development is a link between a universal desire and a form of government action that is believed to be a means to that end.

The relationship between taxation and determinants of tax revenue collection has of recent become one of the most important economic issues for discussion. This is particularly due to the poor fiscal performance developing countries. Kagina (2010) commissioner of Uganda Revenue Authority sentiments in the working paper on taxation and state building toward a Governance Focused tax policy Agenda quoted 'We should elevate ourselves from being just tax collectors and tax administrators to being state builders'. Taxation is fundamental to sustainable development, as it supports the basic functions of an effective state and sets the context for economic growth. More often overlooked is the role of taxation as a catalyst for the development of responsive and accountable government, and for the expansion of state capacity. Recent research has begun to focus on this broader relationship between taxation and state building, but the analysis has frequently remained relatively theoretical and abstract OECD (2008); Moore (2007, 2008).

Oil levy contributes a big percentage in growth of economy in developing counties. Levy collected is used in maintaining of roads. Kenya has been adjusting the pump prices upwards following disputes with the Government over the management of the multibillion industries. This has left motorist to spend more on fuel despite the hard economic times. Kenyan Oil companies have exhibited monopolistic tendencies where there are few dominant firms, independent decision making by some firms and ease of entry and exit. With such features the government has come up with a raft of measures such as formation of government owned oil company, introduction of upfront tax on crude oil and the latest known as batching where a company only gets its oil if it is released in a certain batch. Omondi (2010).

These regulations measurers had various implications on the industry. First the introduction of upfront tax led to major companies to exit the market with the argument that this affected their cash flow forcing some to take up bank loans in order to pay for the tax. Though this improved the Kenya Revenue Authority the efficiency to collect the tax it did hurt the economy through lost jobs. Secondly the formation of a government owned company has

never saved the situation as the company joined the rest in their mode of operations and with the aggressive acquisition of some oil outlets we may end up with the same monopoly that was being avoided. Thirdly the batching has opened up the old business malpractice of hoarding where a seller does not release the stock to the market but waits until the demand upshots the supply causing the prices to sky rocket and hence making a kill out of it. Many motorists were forced to leave their vehicles at home which were a loss to government revenue collected from the fuel. After all these failed attempts to tame the oil industry the Government had no option but to introduce price controls on the oil companies since output control had been ignored by the players in the industry. This was achieved since the Ministry of Energy had the figures of all the costs related to the oil and a margin of between 10-12% was allowed. Despite the argument of a liberal market, the implication on the behavior of oil companies had on the whole economy and the neighboring countries such as Uganda that depends on the same oil; Omondi (2010). Researcher is prompted to study the study topic this so as to fill the gap that existed in the study of Wawire (2011) on the determinants of Value Added Tax in Kenya Mwakalobo (2009) the impact on government revenue and public investment and focus on the tax base on Pay as You Earn groups that have been left out and change in oil prices that has left government to lose revenue collected from oil companies due to monopolists.

1.1.3 The Relationship between Determinants and Tax Revenue

In Kenya fiscal structure reveals that government expenditure and revenue have maintained consistent growth patterns with expenditures always exceeding revenues. The imbalance between revenue and expenditure results in large fiscal deficits. Tax reforms have been undertaken but taxes have not been as productive as desired. A poor tax performance, in terms of raising revenue can either mean deficiencies in tax structure or an inadequate effort on the part of the government, both of which are influenced by various factors. Determinants at long run have an impact on tax revenue. Studies from developing countries conducted by Tanzi (1981) and Leuthold (1991) predicted that determinants have direct effect on tax capacity. These studies focused on tax revenue and GDP ratio leaving out other determinants and which contributes directly to tax revenue and raising an answered question.

1.2 The Statement of the Problem

Developing countries face budget deficits because tax revenue collected do not balance off budget expenditure. Several studies have been undertaken in response to tax revenue and changes in GDP by Wawire 2011, Muriithi M K. and Moyi (2003) Gupta, A. S. (2007). These Kenyan studies have shown positive relationship between tax revenue and GDP but they omitted the key issues on determinant of tax revenue such as, tax base, changes in oil prices, exchange rates, change in tax rates among others factors affecting tax revenue.

Stotsky and woldemariam (2007) undertook studies in Sub-Saharan country on tax efforts that revealed many sub-Saharan Countries in African face difficulties in raising tax revenue for public purpose. The study undertaken was to measure the determinants of tax share of the tax GDP and construct a measure of tax effort. In another study on tax efforts under taken in Arab countries by Nagy (2000) revealed that Tax Revenue performance varies across Arab countries. Study concluded that Tax revenue trends are not uniform across these Arab countries. Some countries have enjoyed sustained increases in tax revenue shares in recent years while others have seen tax revenue shares weaken.

According to Njoroge (2009) study he assessed how the corporate tax rate affects financing for firms listed at Nairobi Securities Exchange. The study was aimed to establish the relationship between effective corporate tax rate and debt ratio .A survey conducted on 37 companies concluded that effective tax rate has a negative effect on debt financing thus increase in corporate tax rate lead to decrease in debt financing hence results being supported by pecking order theory. The recommendation was made that further studies be done to find out how listing affects the operations once they are listed.

In the study undertaken by Eshwani (2006) to establish if there was any relationship between taxation and Foreign Direct Investment in Kenya used a sample period of ten years (1994-2003).The study revealed that there was effective taxation level reduction in the year 1994- 2003 and there was cyclical trend with some years reporting robust growth of the volume with the highest recorded in 2000.He made further recommendation to focus on accelerating the process of deregulation of foreign Direct investment initiated in Kenya.

Recently Kenya experienced a problem of oil prices fluctuations that had shown many motorists reduce the usage of motor vehicles in order to cut down on fuel consumptions. Through this situation government revenue estimates had implication on budget statement because budget works on estimates which are captured during budget preparation and if this revenue is not realised there is an increase in budget deficit. This study also focuses broadening of tax base to strengthen income tax revenue. When the tax base is broaden tax revenue increases reducing budget deficit. Members of Parliament for a long time have enjoyed tax exemptions on pay as you earn until year 2011/2012 when Minister of Finance released a finance bill in parliament for lifting the exemptions. A serious debate raised several where several were raising controversial sentiments concerning the issue. Until financial Year 2012/2013 the Minister of Finance made it clear that all MPs to pay taxes on their salaries and implementation were made.

Tax rate in Kenya have remain constant for almost a decade which has affected tax revenue. Due to change in population growth rate KRA has to revise tax rates to administer the problem in tax revenue. If changes are not considered the situation remain constant and in case of any change will be bring resistance like change in withholding tax rate that was effected by the Minister Finance in 2011/2012 to 10% was reverted back to 5% in May 2012. The researcher is concerned with the issue of tax revenue collected and tax budget deficits a problem that has been experienced since independent. Several studies observed the relationship between determinants of tax revenue and that is the basis of research that needs to answer the question what are determinants of tax revenue Kenya.

1.3 The Objective of the Study

The objective of the study is to establish the determinants on tax revenue in Kenya

1.4. Significant of the Study.

The study contributes to existing literature on tax revenue. The results could be use to increase tax base that have been in place and not yet implemented. Example payment of tax by land lord on rent collected was enacted long time but implementation has not been done till the financial year 2012/ 2013 in budget statement. To the government the results will be used to design growth-oriented programmes and improve the budget mix in Kenya. Since the study is country specific it will attempted to give a picture of the taxation system in Kenya.

The research findings will be of importance to policy makers at national level and help in designing policies aimed at enhancing improved revenue collection. Budget deficits will be a forgone history to the government thus resulting to decreases in government costs that may result to improvement of social welfare to citizens.

Academicians who wish to undertake further research on taxation will also find the literature arising from this study to be of great value. This study will add to the existing literature review regarding this subject. The findings and conclusions made at the end of this study will form a base for criticism or building on the conclusion. The study also stimulates further research in the area of taxation

Business Persons who pay taxes will demand the accountability of their taxes in the growth of the economy by putting pressure on government to wisely spend taxes collected for right purposes. Example if its fuel levy collected the government will use the levy in mentainance and repair of roads.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter is to focus on theories of tax revenue, determinants of tax revenue and empirical studies on determinants of tax revenue on the past studies done within Kenya and outside Kenya. It provides a critical look at the work that has been done by other researchers which are related to this study. Determinants of tax revenue are the main key issues that affect tax collection. If these issues are addressed then there is change in tax revenue. Change in tax revenue will have positive or negative influence on the budget deficit. The determinants of tax revenue explained in this chapter are tax base, changes in oil prices, exchange rates and change in tax rate.

2.2 Theoretical Frame Work

The most common measures of determinants of tax revenue in Kenya are tax base, economic environment regulatory framework corruption among others. Studies done before used tax share indices from mining, agriculture, exports, and imports among others and analysed a single period of cross-sectional data across regions.

2.2.1 Optimal Tax Theory

According to Ramsey (1927) and Mirrlees (1971) optimal tax theory is concerned with the ideal level and form of economic redistribution. The optimal tax theory seeks to determine how government can maximize social welfare through taxes and transfers, without increasing the sacrifice on the part of tax payers. Whether conscious or not, optimal tax theory actually embodies a resource egalitarian view of distributive justice to a large extent. However, the reasoning behind the theory's principles emphasizes incentives, efficiency, and the information that choices reveal about individual well being. This theory indicates that optimal taxation is a function of tax charge and how this tax is collected to ensure fair redistribution of welfare.

2.2.2 The Theory of Fiscal Policy

The theory suggests that governments raise revenues and use the collected resources to finance public investment spending for the provision of public goods and targeted development projects. Policy decisions are made by the government, which decides on how

best to allocate the collected limited resources into alternative competing sectors Hassler et al. (2007); Battaglini and Coate, (2008). Choices have to be made how to allocate the limited resources, so governments face tradeoffs Khattry (2003) in the developing countries.

2.2.3 Ability to Pay Theory

Slade Kendrick (1939) came up with the theory of ability to pay which considered tax liability in its true form, compulsory payment to the state without quid pro quo. It does not assume any commercial or semi-commercial relationship between the state and the citizens. According to this theory, a citizen is to pay taxes because they are able and his relative share in the total tax burden is to be determined by his relative paying capacity. This doctrine has been in trend for at least as long as the benefits theory. This theory was bound to be supported by socialist thinkers because of its conformity with the ideas and concepts of justice and equity. However, the doctrine received an equally strong support from non-socialist thinkers also and became a part of the theory of welfare economics. The basic principle of this theory is that the burden of taxation should be shared by the members of society on the principles of justice and equity and that these principles necessitates that the tax burden is apportioned according to their relative ability to pay theory.

2.2.4 The Cost of Service Theory

This theory was developed by Gordon (1959) which emphasizes on the relationship between the state and the citizens to a greater extent. The implication is that the citizens are not entitled to any benefits from the state and if they do receive any, they must pay the cost thereof. In this theory, the state is being asked to give up basic protective and welfare functions. It is particularly to recover the cost of the services and therefore this theory, unlike the benefits received one, specifically implies a balanced budget policy. In the process, the state is not to be concerned with the problems of income distribution. No effort is to be made to improve income distribution and no notice is to be taken if the policy of levying taxes according to the cost of service principles deteriorates it further.

2.3 Determinants of Tax Revenue

2.3.1 Tax Base

Tax base is one way of government broadening its tax collection avenues. If tax bases are narrow the revenue level of the country shrinks and if broadens the level of revenue increases. Many tax bases have been in place by tax law but not enacted. Recently we have

experience broadening of tax base where all Members of Parliament will be paying taxes on their salaries with effect from financial year 2012/2013. Also landlords are to pay taxes on rent collected with effect from July 2012. Another area of tax revenue improvement is on Value added tax. All goods and services that have been exempted from tax and zero rated will amount to payment of VAT when the bill is passed in parliament .If all these changes are incorporated the tax base will be broadened. The study by Beck, Demirguc-Kunt and Levine (2000) in European countries on tax base reveals that change tax base broadens the tax base system by increasing tax revenue for a given tax rate with positive one and change in tax base can also shrinks the tax base as negative one or the tax credits, depreciation allowances, loss carry back and loss carry forwards.

2.3.2 Change in Oil Prices

In Kenya oil companies import crude oil which is refined by Mombasa oil Refinery before being transported by Kenya Pipeline Company for various uses by industries and motorists. Fuel which generated from oil after being refined is used in the generating of electricity in Kenya. In case where there is a change in oil price everything is affected including the growth of the economy by loss of foreign trade that made between Kenya and Uganda for the import of oil. Oil companies are the backbone of our economy today and if oil price fluctuates it affects the fiscal budget of the country. Oil companies continue to be challenged with implementing local tax legislation, largely because they vary so much from normal corporate tax regimes. Many countries mandate their own legislation, covering both the production and consumption of energy as Kenyan is now trying to put in place new tax policy on oil discovered in Turkana early this year. During 2010, many countries changed their tax regimes, which affected tax burdens for companies. Specifically, changes influenced industry taxes, such as royalties and petroleum taxes and affected the general taxes as well, such as income tax rates and other general fiscal terms. High oil prices have increased governments' objectives to maximize efficient production of oil to improve state budgets while securing a fair return for the extraction of nation's natural resources. Frontier countries with recently discovered hydrocarbon fields are designing their national legal and tax legislation for oil industry. Mature oil countries, such as the United Kingdom, Norway and Russia are facing necessity to revise their tax legislation to provide tax regimes which will stimulate development of capital intensive fields, such as Arctic projects. The majority of countries are using production sharing arrangements to develop oil and gas fields solely, or together with other taxation principals and contract arrangements; Ernest & Young (2011).

Change in oil prices not only affect the importing countries but as experienced by exporting countries are confronted with significant uncertainty relating to its export earning and fiscal revenues. Supply and demand in the oil market are both highly inelastic in the short run, with the result that even small shocks can have large effects on price. The unpredictability regarding oil revenues, which stems from uncertainties about such issues as the future trend in oil prices, the size of the oil reserves, and the cost of extraction is problematic for both short-run and long-run management of the economy. In the 1970s, the Organization for Petroleum Exporting Countries (OPEC) made great efforts to manage oil price volatility by fixing the reference price for crude oil. However, OPEC's pricing policies and supply mismanagement ceased to be an effective instrument for steering world oil markets and for stabilizing the price of oil Barnett, Steven & Rolando Ossowski (2003).

2.3.3 Exchange Rates

An exchange rate is a price exactly the same as any other price the amount you have to give up to acquire something else in this case another currency. Government generate income from foreign exchange earnings. Foreign exchange market in Kenya is influence by a number of factors such as the changing pattern of the international trade, institutional changes in the economy and structural shifts in production. Before the establishment of the Central Bank of Kenya (CBK) the enactment of the Exchange Control Act on foreign exchange was earned by private sectors and commercial banks which acted as agent for local exporters. During this period, agriculture export contributed the bulk of foreign exchange receipts. Kenyan main foreign exchange is earned from Agriculture, Tourism among others. The exchange rate is one of the intermediate policy variables through which monetary policy is transmitted to the larger economy through its impact on the value of domestic currency, domestic inflation, the external sector, macroeconomic credibility, capital flows, and monetary and financial stability. Thus exchange rate might induce changes in relative prices of goods and services, and the level of spending by individuals and firms, especially if significant levels of their wealth are held in foreign currencies. An appreciation in the value of an exchange rate rise makes imported goods and services relatively cheap. while depreciation makes export become cheaper to foreign buyers, thereby inducing higher competition in export markets at home of which may have an influence on tax revenue. Inflation is a strong weapon that fights Exchange rate and cause fluctuation in price of goods and services.

2.3.4 Change in Tax Rates

Tax rates are made from various categories of taxes. Income tax uses the progressive scale when to compute taxes on personal income. Tax collected from personal income is collected by employer at the source and accounted for to Kenya Revenue Authority. Value added tax is levied on manufactured goods and services and collected through the use of Electronic registered by various businessmen and account to KRA. All businesses with annual turnover greater than KSh 3 million are supposed to register as VAT taxpayers and submit monthly returns. In addition, certain traders and members of certain professions are required to register independently of their turnover, but this requirement is not well enforced. Corporate tax is deducted by manufacturers before payment of dividend and files the returns at every financial year. Change in tax rate has positive or negative influence on the tax revenue. Example when income tax brackets broaden it means tax revenue will have to reduce and have an impact on the budget. When change in tax rate is effected is affected too.

Both developed and developing countries are faced with tax revenue whenever change in tax rates is affected. Although evidence of a substantial change in tax rates has been hard to find, evidence that taxpayers respond to tax system changes more generally has decidedly not been hard to find. For example, there is compelling evidence in the U.S. the timing of capital gains realizations reacts strongly to changes in capital gains tax rates. There was a surge in capital gains realizations in 1986, after the U.S. government passed the Tax Reform Act of 1986 which increased tax rates on realizations in 1987 and after Auerbach (1988). Dropping the top individual tax rate to below the corporate tax rate in the same Act led to a significant increase in business activity carried out in pass through, non corporate form Auerbach and Slemrod (1997).

2.4 Empirical Studies

Empirical studies focus on what other researchers have done in the area of taxation in Kenya and other countries. For researcher Simon and Nobes (1992) identify three economic functions of the government i.e. to overcome inefficiencies of the market system; to redistribute income and wealth in order to move towards the distribution that society considers equitable; and to smooth out cyclical fluctuations in the economy to ensure a high level of employment and price stability. Taxation has a role to play in each of these functions. To control market failure, the government raises taxes to erect and maintain pure public goods, purchase merit goods and also to reduce de-merit goods. Revenue from taxes can be

used in the production of goods with external benefits while a tax can be imposed to reduce production of goods with external costs. The tax system of any country is well known to be a powerful tool for influencing the level of activity i.e. stabilize the economy and is also used to influence the distribution of income and wealth through resource rechanneling. However, for taxation to have a proper role in these economic functions there is need to strike a balance between the tax system and economic efficiency. Taxation carries with itself three categories of burdens i.e. compliance costs, administrative costs and the excess burden of taxation. Compliance costs are those incurred by the private sector in complying or not complying with the requirements of the tax system; administrative costs refer to the burden exerted to the public sector while administering taxes; and the excess burden arises from the distortion of consumer choice between goods that are actually produced

According to Luft (2006) since 1970s, the world economy has suffered adversely due to fluctuation in oil prices. Although there were periods of recovery but that could not sustain long and the adverse impact mostly dominated the world economy IMF (2000). The developed economies faced decline in growth estimated to be around 2% per annum. The period of high oil prices gave rise to inflationary pressure and consequently the increase in consumer expenditure. On the other hand, the developing economies, particularly the poor countries suffered badly during the period of rising oil prices. Their growing development needs are linked with the availability of energy, mostly the oil, since each increase in the prices of oil results into the corresponding increase in import bill and each increase in import bill further deteriorates the current account deficit. As oil is an essential component of industrial and manufacturing unit, the increase in oil prices necessarily increases prices of consumer products thus creating inflationary pressure. Consequently, developing economies see the flow of wealth from consumers to producers. Due to rise in the prices of domestic products, these become less competitive in international market and thus, their exports suffer badly. The world needs to increase the oil production.

As pointed out by Luft (2006), oil production could be enhanced up to 60% by the use of advance technology for the recovery of oil, extension in the drilling techniques and the establishment of advance reserves. Thus enhancement in oil production does not necessarily require new discoveries but the introduction of emerging technology and techniques. It would enable the recovery of oil up to 50% to 100% more than the existing volume of recovery.

According to US Department of Energy (2006), up to 337 billion barrels oil worldwide can be recovered by injecting natural gas, nitrogen chemicals item and carbon dioxide.

A research study conducted by Valadkhani *et al.* (2001) takes example of Australia and assesses impact of oil price changes on consumer goods and services during the year 1996-97. The major impact of price rise was borne by transport sector and agricultural sub-sector. Further, study shows that the impact of rise in oil prices on Australian economy in the year 1996-97 was more than what was observed in 1970s. Valadkhani *et al.* (2001) also show that the poor spend a higher proportion of their total consumption expenditure on basic necessities than that of rich and vice versa. In this way we can rank the items of consumption expenditures according to their priorities of expenses in terms of weights. The poor household spends more on diesel fuel, kerosene, heating oil, lubricants, other oils, meat, dairy products, food products and other gas fuels. The increase in oil prices increase cost of production of these items. This increase is relatively more than other items which are less demanded. It can be easily concluded that increase in price of petroleum has affected both the consumers and producers. Technically speaking, it can be tentatively concluded that impact of price rises are regressive in nature

According to Scerri and Reut (2009), changes in oil prices have also impact on budgetary estimates. The estimates of revenue from taxation tilt in favour of oil producing companies whereas it would show decline on consumption (demand) side. Similarly, the pattern of profit distribution also changes across industrial sector and also the house hold spending would provide different picture with change in oil prices.

In relation to Kenya, Ole (1975) estimated income elasticity of tax structure for the period 1962/63 to 1972/73. Tax revenue was regressed on income without adjusting for unusual observations. The results showed that the tax structure was income inelastic for the period studied. The study recommended that the system required urgent reforms to improve its productivity. The results also implied that Kenya's tax structure was not buoyant and therefore the country would require foreign assistance to close the budget deficit

Among the Kenyan researcher Muriithi and Moyi (2003) applied the concepts of tax buoyancy and elasticity to determine whether the tax policy in Kenya achieved the objective of creating tax policies that made yield of individual taxes responsive to changes in national income. They used equation 2 to estimate the responsiveness of tax yields on income. The

results showed that tax policy had a positive impact on the overall tax structure and on individual tax handles and concluded that despite the positive impact, the reforms failed to make revenue responsive to changes in income Reform.

According to Tanzi, (1993), Basu and Morrissey (1997) and Patel et al. (1997) studies on economic reforms was partly due to the fact that deleterious effects of reduced public investment are felt with long lags, whereas other components of government budgets, such as transfers and public sector wage bill have higher and more immediate political costs. The extent of the effect of economic reforms on public investment spending may differ, given differences in macroeconomic conditions, structure of the economy, level of development and the size of the government.

According to Njoroge (1993) study on revenue productivity on tax policy in Kenya for a period of 1972/73 to 1990/91 tax revenue was regressed on income after adjusting tax revenues for discretionary changes. The period of study was divided into two to make it easier to analyze the effects of tax policy on revenues from various taxes. Income elasticity of total tax structure was found to be 0.67 for the period 1972 to 1981. This meant that the government received a decreasing share of rising GDP as tax revenues. The study concluded that from a revenue point of view, the system did not meet its target; hence it required constant review as the structure of the economy changes. However, the results could not be relied upon because the study never took into account time series properties of the data

In Tanzania another researcher Osoro (1993) examined the revenue productivity implications of tax policy in Tanzania. In the study, the tax buoyancy was estimated using double log form equation and tax revenue elasticity using the proportional adjustment method. The argument for the use of proportional method was that a series of discretionary changes had taken place during the sample period, 1979 to 1989, making the use of dummy variable technique impossible to apply The study concluded that the tax policy in Tanzania had failed to raise tax revenues. These results were attributed to the government granting numerous tax exemptions and poor tax administration. According to Ariyo (1997) evaluated the productivity of the Nigerian tax system for the period 1970 - 1990. The aim was to devise a reasonable accurate estimation of Nigeria's sustainable revenue profile. However, the results indicated wide variations in the level of tax revenue by tax source

In Malawi one of the researcher Chipeta (1998) evaluated effects of tax policy on tax yields for the period 1970 to 1994. The results indicated buoyancy of 0.95 and an elasticity of 0.6. The study concluded that the tax bases had grown less rapidly than GDP. Kusi (1998) studied tax policy and revenue productivity of Ghana for the period 1970 to 1993. Results showed a pre-reform buoyancy of 0.72 and elasticity of 0.71 for the period 1970 to 1982. The period after reform, 1983 to 1993, showed increased buoyancy of 1.29 and elasticity of 1.22. The study concluded that the reforms had contributed significantly to tax revenue productivity from 1983 to 1993.

Wawire (2000) used total GDP to estimate the tax buoyancy and income-elasticity of Kenya's tax system. Tax revenues from various sources were regressed on their tax bases. Based on empirical evidence, the study concluded that the tax system had failed to raise necessary revenues. However, the shortcomings of the study were, first, it never considered other important determinants of tax revenues, for example, unusual circumstances that could have affected tax revenue productivity. Second, it never disaggregated tax revenue data by source hence it was difficult to say which taxes and bases contributed more to the exchequer. Third, it never took into account the time series properties of the data.

A Zambian researcher Milambo (2001) used the Divisia Index method to study the revenue productivity of the Zambian tax structure for the period 1981 to 1999. The results showed elasticity of 1.15 and buoyancy of 2.0, which confirmed that tax policy, had improved the revenue productivity of the overall tax system. However, these results were not reliable because time trends were used as proxies for discretionary changes and this was the study's major weakness.

Empirical studies on seminal work. Cover (1992) shows based on data from the U.S. that an expansionary monetary policy does not have an effect on the output, while a contractionary monetary policy affects the output. Ball and Mankiw (1994) prove that price adjustment is asymmetric in the presence of trend inflation. They conclude that a positive monetary shock is more likely to induce price adjustment than is a negative shock. Garcia and Schaller (1995) apply Markov switching model on data from the U.S. and find statistically significant evidence of asymmetry. Karras (1996) proves that the effect of monetary policy is asymmetric. In fact, he finds a negative money supply shock has a significant effect on output. However, the effect of a positive shock is statistically insignificant.

Further Karras's (1996) study covered 38 countries during the period 1950-1990. Therefore, his work illustrates that the asymmetric effect of monetary policy is an international phenomenon. Moreover, the empirical work of Karras (1996) shows the effect of monetary policy on prices is symmetric. According to Kaufmann (2001) confirms that the effect of monetary policy is asymmetric. Peers man and Smets (2001) use data from seven countries of the euro area. The empirical results prove that the asymmetric effect is significant in Germany, France, Italy, Spain, and Belgium, while they are less significant in Netherlands and Austria.

In the study Engen and Skinner (1996) argue that taxation can affect economic growth in five ways. First higher taxes can discourage the investment rate through high statutory tax rates or corporate and individual income, high effective capital gains tax rates and low depreciation allowances. Second, taxes discourage labour force participation or distort occupational choices and can also affect the choice for acquisition of skills, education and training. Third, tax policy has the potential to discourage productivity growth by attenuating research & development and the development of venture capital for hi-tech industries. Fourth, tax policy can influence the marginal productivity of capital by channelling investment from heavily taxed sectors to more lightly taxed sectors with lower overall productivity. Fifth, heavy taxation on labour supply can distort the efficient use of human capital by discouraging workers from employment in sectors with high social productivity but a heavy tax burden.

Chhibber and Shafik (1992) carried out a study on Ghana inflationary trend (1965-1988) and pointed out that growth in money supply is one official variable that is responsible in Ghana's inflation. Such variable are official exchange rate and real wages could only exert negligible influence on inflation. Substantial level of positive relationship was found between the parallel market exchange rate and general price level.

Odedoku (1995) identifies in his studies causes of inflation in sub Sahara Africa. By employing econometrics to analyze annual reports data for 35 countries from 1971. 1990. The findings suggest that monetary growth, the rate of domestic currency depreciation, and the expectation of inflation have positive effects on inflation, while expansion of per capita food production as well as overall economic growth serve to reduce inflation rates. We are unable to detect positive effects of fiscal deficit variables, foreign inflation rates, or the growth of import prices on the domestic inflation rates

Morley (1992) analyzed the effect of real exchange rates on output for twenty-eight devaluation experiences in developing countries using a regression framework. After the introduction of controls for factors that could simultaneously induce devaluation and reduce output including terms of trade, import growth, the money supply, and the fiscal balance, he observed that depreciation of the level of the real exchange rate reduced the output.

According to study done by London (1989) to examined money supply and exchange rate, in the inflationary process of twenty three Africa countries. The application of pure monetarist model on supply, expected inflation and real income were significant determinants of inflation for the period between 1974 and 1985. exchange rate was later included as one of the explanatory variables in pure monetarist model. The result shows that exchange rate movement had remarkable influence on the inflationary process in 1980s.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter sets out various stages and phases that were followed in completing the study. It involves a blueprint for the collection, measurement and analysis of data. Therefore in this chapter the research identified the procedures and techniques that were used in the collection, processing and analysis of data. Specifically the following subsections are included; research design, target population, sampling design, data collection instruments, data collection procedures and finally data analysis.

3.2 Research Design

A descriptive approach was adopted in this study which is causal relationships between variables established and it also provides the researcher with in depth information, which assists in meeting the objectives of the study. According to Mugenda and Mugenda(2003) descriptive research is the process of collecting data in order to answer questions concerning the current status of the subject in the study. The purpose of the descriptive approach is the description of the state of affairs as it exists at the present. The researcher can only report what has happened or what is happening Kothari (2004).

3.3 Study Population

According to Ngechu (2004), a population is a well defined or set of people, services, elements, events, group of things or households that are being investigated. The study population in this study involves total tax revenue generated from various tax variables. Tax revenue for various variables is accumulated and recorded within a financial year which makes it easier to study. The justification for considering these variables population is not scattered and can easily be accessed at one centre.

3.4 Target Population

In target population it's the representative population that is undertaken on behalf of the entire study population. The population interested for this study cover a period of between years 2007 to 2011 because five years it's the fundamental period for government planning. The target population characteristic is as summarized in the table below Mugenda and

Mugenda, (2003), which explain that the target population should have some observable characteristics, to which the researcher intended to generalize the results of the study.

3.1 Table Target population

Years	2007	2008	2009	2010	2011
Total Tax Revenue	360,191	433,915	480,569	534,403	634,903
Tax Base (GDP)	22%	21.80%	22.30%	24.10%	24%
Average Exchange Rates	67.15	69.78	77.28	79.45	88.83
Percentage interest rates	6.40%	6.7%2	7.71%	3.61%	8.61%
Average oil prices-Regular	79.16	93.73	79.64	90.17	112.86
Average oil prices -Diesel	70.22	89.38	71.74	78.94	105.53

Source Author (2012)

3.5 Data Collection Method

In this study data was collected using quantitative method. Quantitative data is the information that can be expressed in numerical terms, counted, or compared on a scale. KRA is where a substantial amount of materials and records was obtained and others will include Quarterly Budgetary Reviews prepared by National Bureau of Statistics, International Monetary Fund Financial Statistics Year Books, Budget Speeches, Statistical Abstracts and National Development Plans. The reason of selecting secondary data is because the study is based on historical basis.

3.6 Data Analysis

Data for this study was quantitative and hence explanatory technique was employed. Data collected was coded and formatted before being analysed in terms of both descriptive and inferential statistics. The findings were presented using pie-charts, bar- charts and tables. Data analysis used SPSS and Microsoft excel percentages, tabulations, means and other central tendencies and tested using chi-square and t-test. Tables were used to summarize responses for further analysis and facilitate comparison. This generated quantitative reports through tabulations, percentages, and measure of central tendency. Cooper and Schindler (2003) noted that the use of percentages is important for two reasons; first they simplify data by reducing all the numbers to range between 0 and 100. Second, they translate the data into standard form with a base of 100 for relative comparisons. In addition inferential statistics used at 95% confidence level. This provided the generalization of the findings on determinants of tax revenue in Kenya.

3.7 Empirical Model

The model used in this study was borrowed from Wawire (2011) study on Determinant of Value Added Tax in Kenya. The paper used Paul Samuelson's (1955) fundamental general equilibrium analysis of the public sector.

The following tax revenue equations;

$$\ln T = \alpha_1 + \beta_1 \ln TB + \beta_2 \ln OC + \beta_3 TR + \beta_4 ER + \epsilon_t \dots \dots \dots 1$$

Where,

- TB = tax base (GDP)
- OC = change in oil Prices (average for the year)
- TR = Change in tax Rate (average for the year)
- ER = Exchange rates (average for the year)
- ϵ = estimated parameters for slope dummies
- t = year.
- T = total tax revenue (as per fiscal year)
- α = level of significance 95%

$\sigma_1, \sigma_2, \beta, \beta_2, \beta_3$ and β_4 = elasticity estimates

Dummies used in the model if only they reduce the standard error of regression.

The borrowing of this model was advised by the following factors;

- I. The tax revenues will be regressed on their tax determinants on their taxes which in turn shape the source of income.
- II. Consideration that the total revenue determinants in Kenya are affected by almost every other forms taxes in Kenya.

- III. Exchange rates are deemed to affect the exports and imports and hence the overall customs and excise duty collected which in turn affects the tax on consumption of goods which is the VAT.
- IV. Remittances from abroad also affect increase or decrease in consumption of goods and services in the country.
- V. Cheap loan facilities in Kenya overtime have led to increased business growth, corporate taxes and withholding taxes.
- VI. Depreciation in Kenya shilling in year 2011 led to high exchange rates thus affecting imports and exports average higher oil prices and tax shifting in related areas of production.
- VII. The fixed affect that certain –specific characteristics are not captured by the explanatory variables and that these are uncorrelated with the error term.

Hence tax revenue can be arrived with regression equation as follows;

$$T = \alpha + \beta_1.X_1 + \beta_2.X_2 + \beta_3.X_3 + \beta_4.X_4.$$

Where;

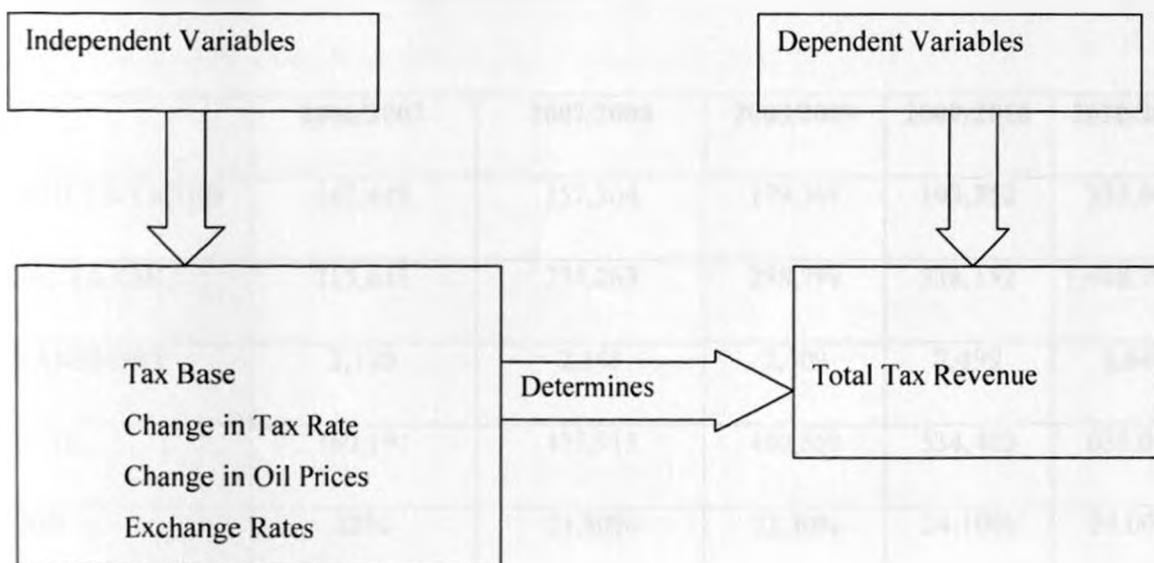
- X_1 = tax base (GDP)
- X_2 = change in oil Prices (average for the year)
- X_3 = Change in tax Rate (average for the year)
- X_4 = Exchange rates (average for the year)
- T = total tax revenue (as per fiscal year)
- α = fixed level of total tax revenue.

$\beta_1, \beta_2, \beta_3$ and β_4 = elasticity estimates

We also investigate how the various sources of tax revenues affect the share of central Government revenue and GDP. We find that countries that rely more on taxes of goods and Services as a source of revenue have lower revenue performance. Since most of the taxes on

goods and services are indirect taxes; they tend to be regressive in nature. As a result, they may exacerbate the inequality in income distribution and reduce the tax base, which in some case may result in a reduction in the share of revenue in GDP. In contrast, greater reliance on taxation of income, profits and capital gains appears to improve revenue performance. To the extent that these taxes are progressive, they reduce income dispersion and generate higher revenue. We also find that the share of tax revenue from trade does not affect revenue performance significantly. Finally, revenue performance does not appear to be determined significantly by corporate and individual tax rates, or by average tariffs, once we have taken into account the structural variables, institutional variables and various sources of tax revenue. As a result, we drop these variables from subsequent analysis.

Independent variables in the study are GDP ratio which is an explanatory variable that serve as a substitute of tax base, change in oil prices, change in tax rates and exchange rates was converted from a one dollar to Kenyan shilling using the average values of that year and the previous year. The average value was used because figures for independent variables were usually given as per calendar year while dependent variable which is total tax revenue was given as per fiscal year that starts on 1st July of each calendar year.



Source: Author (2012)

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND FINDINGS

4.1 Introduction

This study involves analysis of the Degree of how tax variable contributes towards tax revenue collected in Kenya. Quantitative analysis is the summarizing of Data using descriptive statistics, the purpose of which is to enable the researcher to analyse the variables using inferential statistics.

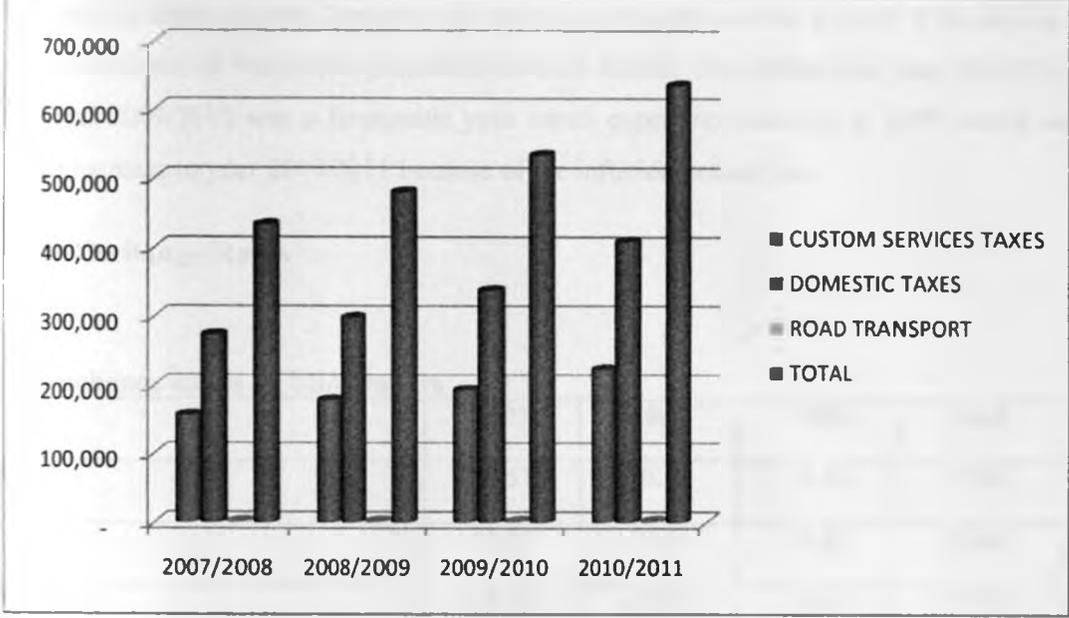
4.2 Data Analysis and Presentation

4.2.1 Tax Revenue and volatility in annual growth (GDP).

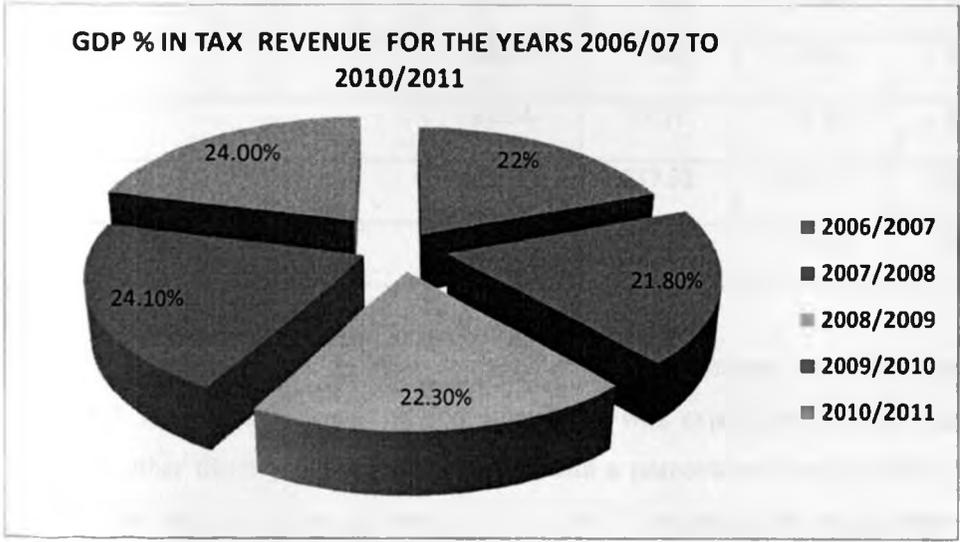
The table below exhibits that the information concerning the tax revenue in Kenya was obtained from only tax collected per year from various tax sources and how total tax changed in growth from year to year. The percentage growth that's GDP was determined by total amount change between two years total amount over for the base year multiplied by 100%.

Table 4.1 Tax Revenue And GDP in Kshs (millions & %)

YEARS	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011
CUSTOM SERVICES TAXES	142,449	157,304	179,361	193,752	223,648
DOMESTIC TAXES	215,617	274,263	298,799	338,152	408,787
ROAD TRANSPORT	2,125	2,348	2,409	2,499	2,648
TOTAL	360,191	433,915	480,569	534,403	635,083
GDP	22%	21.80%	22.30%	24.10%	24.00%



For the period of five years growth tax revenue increased year after the year due to improved tax policy reforms put in place. Domestic taxes showed highest improvement in tax revenue and gradual growth yearly. Introduction of electronic tax register as part of reforms has participated in one of tax reforms controlling the domestic tax evasion. Minimal marginal improvement recorded in tax collected on roads corruption transport sector. Custom taxes improved after East Africa Community trade agreement that relaxed the rules between community countries allowing free trade movement that attracted custom tax revenue.



GDP is independent tax revenue which measure tax base. If tax base broadens it results to an increase in tax revenue collected for the period. If there is change tax revenue then it shows

that there is either growth Domestic tax revenue collected received a boost from income tax where Members of Parliament paid taxes on their salaries with effect from year 2010/2011.in the year 2009/2010 was a favourable year which experience increase in GDP which was a slight increase to year 2010/2011 because of the inflation in that year.

4.2.2 Exchange Rates

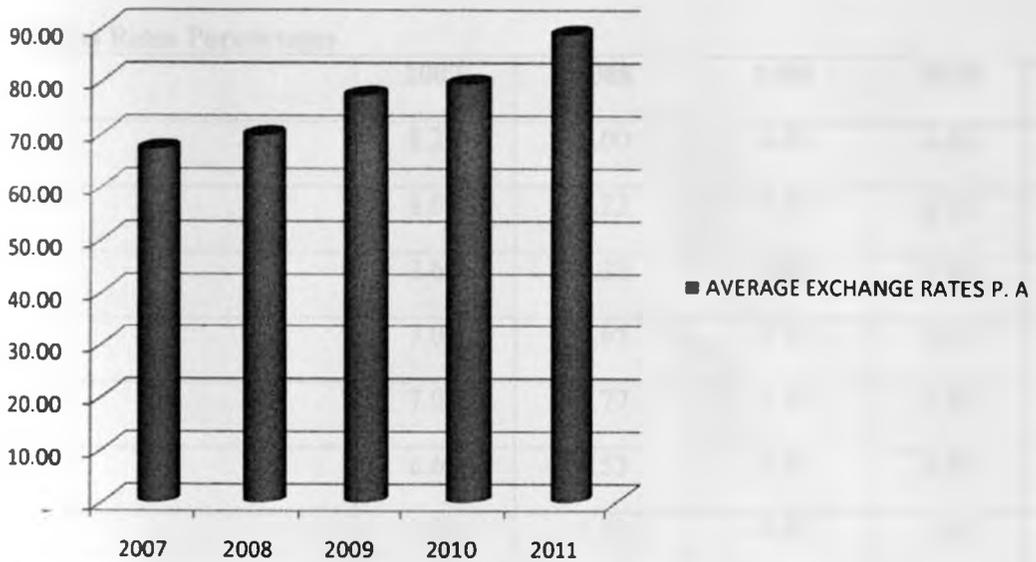
Table 4.2 Exchange Rates In USA Dollars

YEARS	2007	2008	2009	2010	2011
JANUARY	70.53	70.56	79.54	75.89	81.75
FEBRUARY	69.33	70.64	79.69	76.90	83.36
MARCH	68.78	62.77	80.43	77.33	83.55
APRIL	68.31	62.14	78.66	77.27	83.42
MAY	66.97	62.03	78.35	79.75	85.70
JUNE	66.56	64.69	77.02	81.82	89.86
JULY	67.51	67.32	76.61	80.23	91.10
AUGUST	66.75	68.73	76.23	81.07	92.85
SEPTEMBER	66.97	73.22	75.00	80.68	99.83
OCTOBER	67.11	79.65	75.24	80.79	99.78
NOVEMBER	64.42	77.86	74.91	80.97	89.73
DECEMBER	62.54	77.71	75.69	80.75	85.07
TOTALS	805.78	837.32	927.37	953.45	1,066.00
AVERAGE EXCHANGE RATES P. A	67.15	69.78	77.28	79.45	88.83

Source : Kenya National Bureau of Statistics

The table 4.2 displays the monthly averages dollar performance throughout five years thus year 2007 to 2012.during this period fluctuation was experienced in the year 2007 and 2008.The other three years dollar increased with a percentage every month .October 2011 recorded the highest exchange rates of US \$ 99.78 although the same entire year had a massive percentage increase.

Average Exchange Rates Per Annum



The bar chart summarises the averages of every dollar performance yearly. In the year 2011 is the year which recorded the highest exchange rates. When compare that year with growth in the tax revenue it shows there was a slight drop in GDP which is affected by the exchange rates .if the exchange rates increases the effect on tax revenue collected from exports reduce because when exporting we pay high on purchase and sell them at lower prices making losses that reduces our tax level. Majority of exporters tend to reduce exports at such time until the dollar gain the value.

4.2.3 Interest Rates (Treasury bills)

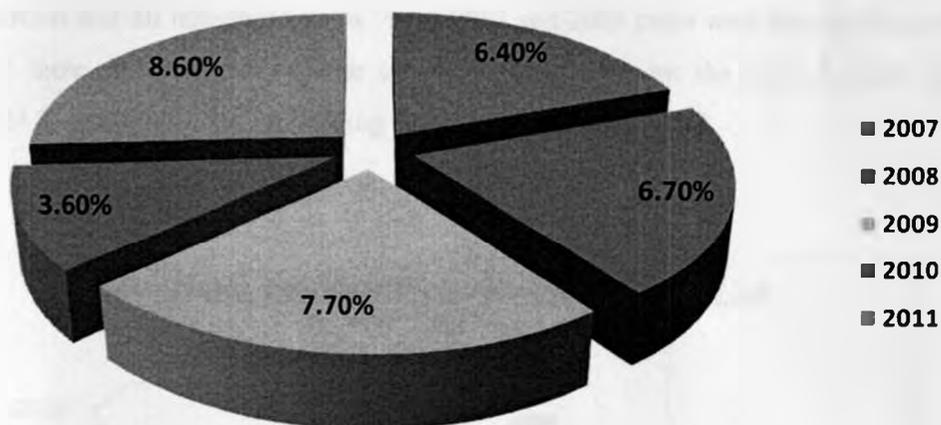
Table 4.3 Interest Rates Percentages

YEARS	2007	2008	2009	2010	2011
JANUARY	8.23	6.00	6.99	6.56	2.44
FEBRUARY	8.03	6.22	7.28	6.22	2.59
MARCH	2.60	6.32	6.89	6.10	2.77
APRIL	7.02	6.65	7.35	5.17	3.26
MAY	7.01	6.77	7.76	4.21	5.35
JUNE	6.60	6.53	7.73	2.98	8.95
JULY	5.90	5.52	8.03	1.60	8.99
AUGUST	5.96	7.30	8.02	1.83	8.23
SEPTEMBER	6.45	7.35	7.70	2.04	11.93
OCTOBER	6.83	7.55	7.75	2.12	14.80
NOVEMBER	6.41	7.52	8.39	2.21	16.14
DECEMBER	5.73	6.86	8.59	2.28	17.90
TOTALS	76.77	80.59	92.48	43.32	103.35
AVERAGE INTEREST RATES P. A	6.40%	6.70%	7.70%	3.60%	8.60%

Source : Kenya National Bureau of Statistics

The table above displays Interest rates expressed in treasury bills. Treasury bills are bonds use used by Government to raise revenue. They are either sold to the public or corporate bodies through the government agent. If these bonds are issued at a higher interest then government lose tax revenue because they are tax exempt and corporate who pays corporate taxes enjoys huge tax shield .interest rates showed that it went as lower as 1.6% in the year July 2010.The entire year recorded the lowest interest rates of 3.61% which signifies an improvement in the tax revenue collected from corporate taxes for the firms that were issued with treasury bills. Year 2011 recorded the highest interest rates of 17.90% in the month of December.

**AVERAGE INTEREST RATES PERCENTAGES PER ANNUM FOR YEARS
2007 TO 2011**



The pie chart shows yearly average percentages of interest rate. The lowest year being 2010 with 3.61 % and the highest being year 2011 with 8.6125%.ther was significant increase of 5.025% between year 2010 and 2011 which affected the percentage change in tax revenue.

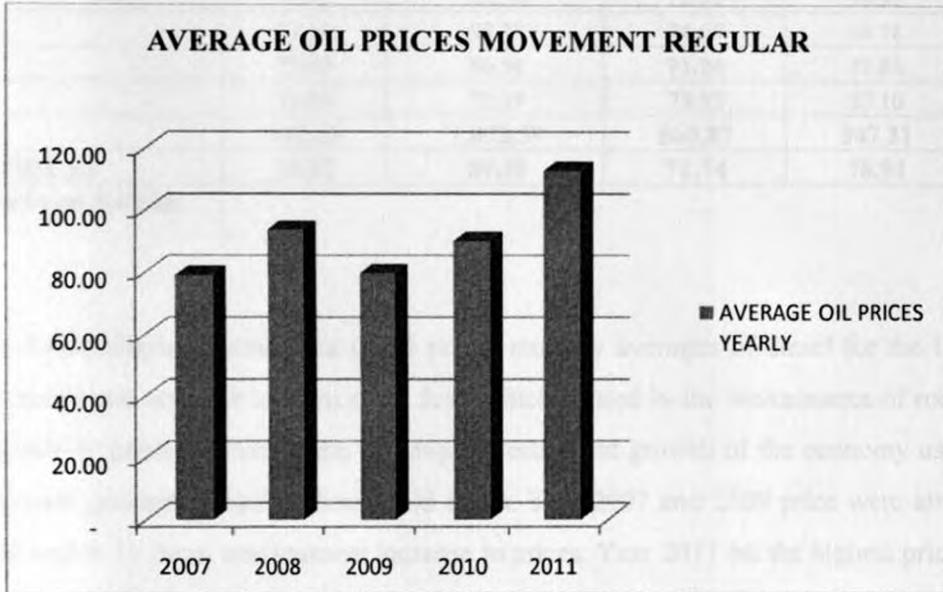
4.2.4 Average Oil Prices Monthly Movement per Pump litre in Kshs

Table 4.4 (a) Oil Prices Movement Regular

MONTHS	2007	2008	2009	2010	2011
JANUARY	76.02	86.10	81.73	83.95	95.37
FEBRUARY	75.30	88.18	80.60	84.61	98.97
MARCH	75.90	89.99	79.41	85.61	103.32
APRIL	76.79	90.71	77.62	86.80	112.10
MAY	78.71	94.94	76.23	88.92	116.31
JUNE	79.18	98.73	77.48	89.19	115.87
JULY	79.78	102.45	78.43	90.83	116.34
AUGUST	80.06	104.18	79.73	91.30	118.03
SEPTEMBER	80.67	101.02	78.90	93.82	118.42
OCTOBER	82.14	98.16	80.57	95.00	121.30
NOVEMBER	82.63	93.27	82.29	96.30	124.85
DECEMBER	82.75	77.07	82.73	95.65	113.39
TOTALS	949.93	1,124.80	955.72	1,081.98	1,354.27
AVERAGE OIL PRICES YEARLY	79.16	93.73	79.64	90.17	112.86

Source : Kenya National Bureau of Statistics

According to table 4.4(a) displays movement of oil prices monthly averages for the last five years since 2007. Oil contributes revenue in form of oil levy which is used in the maintenance of roads. Most motorists use regular oil and rise in prices influence the oil levy collected and growth of the economy as at large. If a price goes up it affects power generation and all household items. Year 2007 and 2009 price were almost similar but for the years 2008, 2010 and 2011 there was massive increase in prices. Year 2011 hit the highest prices for the month of November by Kshs 124.85 and the lowest price being Kshs 75.30 February 2007.



The pie chart shows yearly average movement of regular oil prices. The lowest year being 2007 with an average price of Kshs 79.16 and the highest average price being year 2011 with Kshs 112.86. Within a period of five years year 2008 and 2011 have shown an increase in averages while between years 2009 and 2010 had a wider margin in upward movement.

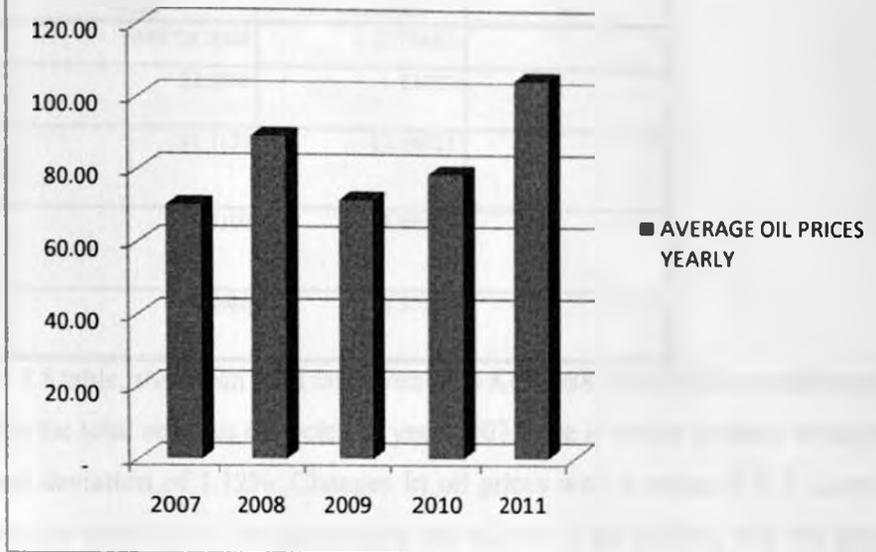
TABLE 4.4 (b) Oil Prices Movement Diesel

YEARS	2007	2008	2009	2010	2011
JANUARY	66.86	77.69	75.57	73.78	89.47
FEBRUARY	65.86	80.17	73.94	73.40	92.47
MARCH	66.36	81.63	72.59	74.10	95.27
APRIL	68.22	84.49	70.11	76.03	108.29
MAY	69.58	98.51	66.11	78.26	108.98
JUNE	69.95	93.18	67.26	78.24	107.26
JULY	70.52	97.68	72.19	78.44	107.08
AUGUST	70.36	100.90	72.52	78.95	109.81
SEPTEMBER	71.33	101.48	72.13	78.95	109.01
OCTOBER	73.18	97.73	74.09	84.18	111.77
NOVEMBER	75.07	86.94	71.24	85.88	115.13
DECEMBER	75.36	72.19	73.12	87.10	105.53
TOTALS	842.65	1,072.59	860.87	947.31	1,260.07
AVERAGE OIL PRICES	70.22	89.38	71.74	78.94	105.01

Source : Kenya National Bureau of Statistics

According to table 4.4(b) displays movement of oil prices monthly averages of diesel for the last five years 2007 to 2011. Oil contributes revenue in form of oil levy which is used in the maintenance of roads. Most motorists use regular oil and rise in prices influence the oil levy collected and growth of the economy as at large. If a price goes up it affects power generation and all household items. Year 2007 and 2009 price were almost similar but in the year 2008, 2010 and 2011 there was massive increase in prices. Year 2011 hit the highest prices for the month of November by Kshs 124.85 and the lowest price being Kshs 75.30 February 2007.

AVERAGE OIL PRICES -DIESEL



The pie chart shows yearly average movement of regular oil prices. The lowest year being 2007 with an average of Kshs 79.16 and the highest average price being year 2011 with Kshs 112.86. Within a period of five years year 2008 and 2011 have shown an increase in averages while between years 2009 and 2010 had a wider margin in upward movement.

15 Regression Analysis

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DESCRIPTIVES MEAN STDDEV CORR SIG N
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CRITERIA=PIN(.05) POUT(.10)
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	Mean	Std Deviation	N
Total Tax Revenue	488796.2000	1.03738E5	5
Tax Base (GDP)	22.8400	1.11937	5
Change in Oil Prices (Average for the Year)	91.1120	13.74021	5
Change in Tax Rate (Average for the Year)	6.6100	1.88853	5
Exchange rates (Average for the Year)	76.4980	8.57206	5

From the table above 4.5 table, the mean total tax revenue is KES 488.79620 Billion with standard deviation of KES 103,738 Million .From the total revenue collected in year 2007 there is hedge increase in tax revenue.GDP has mean of 22.84 with standard deviation of 1.12% .Changes in oil prices with a mean of 91.112 and standard deviation of 13.7 shillings indicates the volatility of the commodity and effects of tax shifting with the government sector to raise more revenue. Exchange rates affect a lot within the imports and exports sector and hence bigger standard deviations of 8.57 has it that the effects cannot be ignored. Changes in tax rate have little or no effect on tax revenue collected as per the data above

Table 4.6 Correlations

		Total Tax Revenue	Tax Base (GDP)	Change in Oil Price(Average for the Year)	Change in Tax Rate (Average for the Year)	Exchange rates (Average for the Year)
Pearson Correlation	Total Tax Revenue	1.000	.854	.811	.214	.984
	Tax Base (GDP)	.854	1.000	.610	-.236	.845
	Change in Oil Price(Average for the Year)	.811	.610	1.000	.352	.744
	Change in Tax Rate (Average for the Year)	.214	-.236	.352	1.000	.276
	Exchange rates (Average for the Year)	.984	.845	.744	.276	1.000
Sig. (1-tailed)	Total Tax Revenue		.033	.048	.365	.001
	Tax Base (GDP)	.033		.137	.351	.036
	Change in Oil Price(Average for the Year)	.048	.137		.281	.075
	Change in Tax Rate (Average for the Year)	.365	.351	.281		.326
	Exchange rates (Average for the Year)	.001	.036	.075	.326	
N	Total Tax Revenue	5	5	5	5	5
	Tax Base (GDP)	5	5	5	5	5
	Change in Oil Price(Average for the Year)	5	5	5	5	5
	Change in Tax Rate (Average for the Year)	5	5	5	5	5
	Exchange rates (Average for the Year)	5	5	5	5	5

From 4.6 table above the correlations (R) between total revenue and the variables i.e. are 0.854, 0.811, 0.214 and 0.984 for total tax base, changes in oil prices, changes in tax rates and exchange rates respectively. From this data there little correlations between total revenue collected and the changes in rates of taxes. There exist big correlations between average exchange rates and changes in Oil Prices that means a change in exchanges rates affects the prices of oil prices and hence increase in overall tax revenue. This correlation (R) of 0.744 mean a change in one variable

will affect the other and tax revenue eventually. Changes in tax rates have negative correlations with tax base (GDP) and hence not a good predictor of total tax revenue as per this analysis with correlation of -.231.

Table 4.7 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
Dimension0	1	1.000 ^a	1.000	.	1.000	.	4	0	.

a. Predictors: (Constant), Exchange rates (Average for the Year), Change in Tax Rate (Average for the Year), Change in Oil Price(Average for the Year), Tax Base (GDP)

Table 4.8 Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefcicients		Correlations			Collinearity Statistics		
	B	Std. Error	Beta	t	Sig	Zero-order	Partial	Part	Tolerance	VIF
	(Constant)	265311.629	.000							
Tax Base (GDP)	-45114.617	.000	-.487			.854	-.1000	-.097	.040	25.000
Change in Oil Price(Average for the Year)	2045.206	.000	.271			.811	1.000	.162	.358	2.795
Change in Tax Rate (Average for the Year)	-19410.147	.000	-.353			.214	-.1000	-.124	.123	8.129
Exchange rates (Average for the Year)	15632.574	.000	1.292			.984	1.000	.274	.045	22.203

Dependent Variable: Total Tax Revenue

Table 4.9 Summary of Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Change in Oil Price(Average for the Year)	5	79.16	112.86	91.1120	13.74021
Change in Tax Rate (Average for the Year)	5	3.61	8.61	6.6100	1.88853
Exchange rates (Average for the Year)	5	67.15	88.83	76.4980	8.57206
Tax Base (GDP)	5	21.80	24.10	22.8400	1.11937
Valid N (listwise)	5				

From the table above the gives the mean indicatives rates of the four variables for the period of five years/period. Oil prices has the highest standard deviation, followed by exchange rate, change in tax rate and tax base respectively. During the year 2009, 2010 and 2011 tax revenue escalated causing high demand of fuel in Kenya and depreciation of Kenya currency against other world currency hence making imports more expensive, increased interest rates. GDP and change in tax rate have a negative correlation while change in oil prices and exchange rates have a positive correlation.

4.6 Summary and Interpretations of the Findings.

4.6.1 Gross Domestic Product (GDP)

In the analysis of data GDP had a negative correlation on tax revenue. It reflects that growth in GDP have little no effect on tax revenue. In the summary descriptive statistics analysis GDP had maximum and minimum of 24.10% and 21.8% respectively, mean of 22.84% and finally standard deviation 1.11937% which reflect minimal margin in the growth in tax revenue. The GDP results reflect the study undertaken by several researchers. GDP results in broadening of tax structure and according to several studies tax structure have little impact on tax revenue. The study undertaken by Ole (1975) on estimated income elasticity of tax structure for the period 1962/63 to 1972/73. Tax revenue was regressed on income without adjusting for unusual observations. The results showed that the tax structure was income inelastic for the period studied. The study recommended that the system required urgent reforms to improve its productivity. The results also implied that Kenya's tax structure was not buoyant and therefore the country would require foreign assistance to close the budget deficit. In Malawi one of the researcher Chipeta (1998) evaluated effects of tax policy on tax yields for the period 1970 to 1994. The results indicated buoyancy of 0.95 and an elasticity of 0.6. The study concluded that the tax bases had grown less rapidly than GDP. Kusi (1998) studied tax policy and revenue productivity of Ghana for the period 1970 to 1993. Results showed a pre-reform buoyancy of 0.72 and elasticity of 0.71 for the period 1970 to 1982. The period after reform, 1983 to 1993, showed increased buoyancy of 1.29 and elasticity of 1.22. The study concluded that the reforms had contributed significantly to tax revenue productivity from 1983 to 1993.

4.6.2 Change in Tax Rate

In the analysis of data change of tax rates had a negative correlation of -1 on tax revenue. It reflects that growth in tax rate have little no effect on tax revenue. In the summary descriptive statistics analysis change in tax rates had maximum and minimum of 8.61% and 3.61% respectively, mean of 6.61% and finally standard deviation 1.88853% which reflect minimal margin in the growth of tax revenue.

4.6.3 Change in Oil Prices

Oil remains the most economic variable in the growth of the economy. Change in oil prices affects manufacturing and service companies due increased utility utilization of power which is more expensive. The effective operations of companies are based on the movement oil prices and have a significant effect on tax revenue. In the analysis of oil prices it has positive correlation on the tax revenue. In the summary descriptive statistics analysis change in tax rates had maximum and minimum averages of 112.86% and 79.16% respectively, mean of 91.1120 % and finally standard deviation 13.74021 % which reflect highest margin in the growth of tax revenue. Considering the analysis this variable is reliable for the growth of tax revenue and growth of economy at large. According to Scerri and Reut (2009), changes in oil prices have also impact on budgetary estimates. The estimates of revenue from taxation incline in favour of oil producing companies whereas it would show decline on consumption (demand) side. Similarly, the pattern of profit distribution also changes across industrial sector and also the house hold spending would provide different picture with change in oil prices.

According to Luft (2006) since 1970s, the world economy has suffered adversely due to fluctuation in oil prices. Although there were periods of recovery but that could not sustain long and the adverse impact mostly dominated the world economy IMF (2000). The developed economies faced decline in growth estimated to be around 2% per annum. The period of high oil prices gave rise to inflationary pressure and consequently the increase in consumer expenditure. On the other hand, the developing economies, particularly the poor countries suffered badly during the period of rising oil prices. Their growing development needs are linked with the availability of energy, mostly the oil, since each increase in the prices of oil results into the corresponding increase in import bill and each increase in import bill further deteriorates the current account deficit. As oil is an essential component of

industrial and manufacturing unit, the increase in oil prices necessarily increases prices of consumer products thus creating inflationary pressure.

4.6.4 The exchange Rates

Exchange rates measure the growth of the economy. Most countries including Kenya use the US dollar as the main standard converter of wealth of a given country. Whenever there is increase in the dollar, the shilling loses its value resulting to depreciation of a shilling. The country whose currency is losing its value against a dollar stands a chance of losing tax revenue collected. In the analysis done in the above chapter reflects exchange rate of a positive correlation and affects tax revenue collected. In the analysis of exchange rates it has positive correlation on the tax revenue. In the summary descriptive statistics analysis change in tax rates had maximum and minimum averages of 88.83% and 67.15% respectively, mean of 76.498 % and finally standard deviation 8.57206 % which reflect second highest margin as a variable of growth of tax revenue. Considering the analysis this variable is reliable for the growth of tax revenue and growth of economy at large. Morley (1992) analyzed the effect of real exchange rates on output for twenty-eight devaluation experiences in developing countries using a regression framework. After the introduction of controls for factors that could simultaneously induce devaluation and reduce output including terms of trade, import growth, the money supply, and the fiscal balance, he observed that depreciation of the level of the real exchange rate reduced the output. In the study of London (1989) to examined money supply and exchange rate, in the inflationary process of twenty three Africa countries. The application of pure monetarist model on supply, expected inflation and real income were significant determinants of inflation for the period between 1974 and 1985. Exchange rate was later included as one of the explanatory variables in pure monetarist model. The result shows that exchange rate movement had remarkable influence on the inflationary process in 1980s which have an influence on tax revenue collected.

CHAPTER FIVE

SUMMARY CONCLUSIONS AND RECOMMENDATION

5.1 Summary

Kenya faces difficult in raising tax revenue for public purpose. Low per capita income and economic base in tax structure, weak tax reforms, political ideologies, poor administration among others contribute in difficulties in raising tax revenue. This study is undertaken in Kenya during the year 2007 to 2011 to measure the Determinants of tax Revenue. The results indicate various variables such as tax rate, change in oil prices, exchange rates and GDP cause proper mix of fiscal policy in the event of budget imbalance.

The government have put in place the KRA as an agent of tax collection and account the collections to the Central Bank of Kenya. KRA requires highly skilled personnel who are able to come up with new skills to improve on data collection. Tax Policy and Administration, "Applying transfer pricing rules based on the arms length principle is not easy, to be implemented. The feeling among some of the public who have been subject to Tax Payer audits by the KRA is that, compared to other tax areas, the KRA is yet to attain the same level of expertise. This becomes apparent from the quality of the queries raised during Tax Payers audits, including unreasonable information requests. In addition, unlike other tax areas, the KRA appears to be slow in zeroing down on Tax Payer issues and pursuing them. The paucity of Tax Payer related assessments may also be indicative of this lack of capacity and experience. All the above issues if addressed then tax revenue will improve.

In consideration of this study Tax rate and GDP have a negative correlation and slightly related to the tax revenue while change in oil prices and exchange rate have greater impact on the tax revenue. The measure of tax revenue is constructed using correlation and regression analysis. The result suggested that exchange rates and oil prices are highly regressed over tax revenue.

5.2 Conclusion

In the conclusions drawn from this study indicate that in Kenya revenue collected from taxation remains the single largest source of government budgetary resources. For the last one decade tax revenue is made up 80 % of total government revenue (including grants). In the last five years, the contribution of tax to total government recurrent revenue (excluding

grants) has averaged 93 %. Comparison of various taxes shows that direct taxes compared to indirect taxes contribute a greater share of overall tax revenues. The determinants of tax revenue include GDP, exchange rates, tax rates and change of oil prices of the economy. Among the notable ones that seem to have had positive influences on tax revenues are change in oil prices and exchange rates of 2011. Tax Revenue respond with lags to changes in their respective tax bases. This means that the previous levels of tax bases (such as GDP) have less significant influence on the present levels of tax revenues. This further means that new policy guidelines contained in the budget speeches are not usually implemented immediately. Hence the long time lag in the response of the taxes influences tax revenue collected from various sources at a point in time.

Finally, the results of this study suggests that significant determinant of tax revenue are change in oil prices and exchange rates. Tax rates and GDP appear to have a strong effect on the tax revenue though there is some evidence with some specification that in the year 2010 tax rates and GDP may have exerted positive effect on tax revenue while with other specification in 2011 they exerted a negative effect.

5.3 Policy Recommendations

Increase in tax revenue can be achieved if taxable capacity is substantially expanded through increased economic activities. These increased activities should occur first and foremost in the sectors that attract taxes both formal and informal. Reforms on change in oil price and Exchange rates would be considered to increasing revenue because they are major variables that control the economy growth which results in the tax revenue. The government should rely on these variables because they are elastic and generate revenue with limited administrative costs Due to the potential negative effects of the implementation time lags on tax revenues, new policy guidelines contained in the budget speeches and other tax policy documents should be implemented, as a matter of urgency, almost immediately.

Broadening of tax base will influence tax revenue if effectively implemented like the recent budget speech 2012/2013 of payment of taxes by landlords and the VAT bill pending in parliament for approval for zero rated commodities is taxed. If government monitoring units are formed to control certain variables will improve the tax revenue and controls the monopolists and cartels like the monitoring unit in oil thus Energy Regulatory Authority.

Business growth rate must be encouraged since they impact positively on corporate tax revenue. Hence reduction in the business growth rate is not good as it reduces corporate when losses are experienced. However, employment was found to have a positive effect on tax revenue as tax base broadens.

5.4 Limitations of the study

Considering that it is difficult to have a perfect research situation, it is then expected that this research will have some limitations. The study experienced difficulties to access the data in KRA given that respondent felt that giving such information was a security threat. After perusal of all documentations collected tax revenue was not clear as it contained variance. Clarification from KRA was impossible as it was considered to be investigative issue.

The period taken to study was too short. The topic is too detailed and required longer period than the deadline time frame. At one time the researcher will stretch his time by extension of night outs by only having only one hour to rest at night and due to this caused little sleep and lack of proper concentration during the day.

Excess costs incurred within this period of study were too much. Transport costs to reach the supervisor, communication costs for calling the office to find out if the supervisor was in, photocopying costs especially during time of defending the project where you are required to make ten copies and bind, the internet costs for browsing so that one is able to get the required information. At one time to get access of the some journals you are required to pay online.

5.5 Suggestion for further Studies

The researcher recommendations show that research should be carried out on determinants of tax revenue on a yearly basis after the review of National Budget. The reason being there are new reforms that affects tax vary on yearly basis after every budget and mostly carry weight on the tax revenue for the Nation. If study takes longer period it will absolute. The study period should not be longer than five years because it's the appropriate period for Government Planning. Areas for further studies should be; Determinants of tax revenue in Agricultural firm. Determinants of tax revenue in service industries, Determinant of tax revenue in manufacturing firms and Measure of tax revenue on the developing countries.

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